

WHAT WE CLAIM ARE:

1. A CCD type solid state image pickup device, comprising:
 - a semiconductor substrate;
 - a number of photoelectric conversion elements formed in and on
 - 5 said semiconductor substrate in a matrix configuration of rows and columns;
 - a plurality of VCCDs each having a vertical channel region formed in said semiconductor substrate along each column of said photoelectric conversion elements, and a first set of charge transfer
 - 10 electrodes formed above the vertical channel region;
 - an HCCD having a horizontal channel region formed in said semiconductor substrate and coupled to one ends of said VCCDs, and a second set of charge transfer electrodes formed above the horizontal channel region;
 - 15 a floating diffusion formed in said semiconductor substrate and coupled to one end of said HCCD; and
 - an output amplifier including a pair of source/drain regions and an input gate electrode traversing above a region between the pair of source/drain regions, the input gate electrode having a portion
 - 20 extending at least near to said floating diffusion, and the input gate electrode being thinner than the first and second sets of charge transfer electrodes.
2. A CCD type solid state image pickup device according to claim 1,
- 25 further comprising a light shielding film covering said VCCDs and said HCCD, said light shielding film having an opening above each of said

photoelectric conversion elements.

3. A CCD type solid state image pickup device according to claim 2,
wherein said input gate electrode is made of a same film as said light
5 shielding film.

4. A CCD type solid state image pickup device according to claim 2,
wherein said input gate electrode is made of a polysilicon layer.

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